

## CLAIMS

What is claimed is:

1. A vehicle information system for optimizing vehicle performance and load distribution, comprising:

a first load sensor for generating a first load signal based on a first vehicle load;

a first position sensor for generating a first position signal based on a position of a vehicle axle;

a second position sensor for generating a second position signal based on a position of a vehicle kingpin;

a memory unit storing optimization data;

an evaluation unit in communication with said first load sensor, said first position sensor, said second position sensor and said memory unit;

a general user interface for receiving an input relating to a request for optimizing vehicle performance and load distribution, said general user interface in communication with said evaluation unit; and

wherein said evaluation unit makes an evaluation of said first load signal, said first position sensor, said second position signal, and said input and generates an optimization instruction relating to a distance between said axle and said kingpin.

2. A vehicle information system for optimizing vehicle performance and load distribution, comprising:

a first position sensor for generating a first position signal based on an actual location of a first vehicle component;

a first load sensor for generating a first load signal based on a first vehicle load; and

an evaluation unit in communication with said first position sensor and said first load sensor, said evaluation unit having a first data output relating to a suggested location of said first vehicle component based on said first position signal and said first load signal.

3. The vehicle information system of Claim 2 wherein said first data output is based on a vehicle center of gravity determinable from said first position signal and said first load signal.

4. The vehicle information system of Claim 2 including a second data output relating to an instruction for altering said vehicle center of gravity.

5. The vehicle information system of Claim 2 including a second load sensor for generating a second load signal relating to a second vehicle load over a second vehicle component, said second load sensor in communication with said evaluation unit.

6. The vehicle information system of Claim 2 including a second position sensor for generating a second position signal based on an actual position of a second vehicle component, said second position signal in communication with said evaluation unit.

7. The vehicle information system of Claim 2 wherein said first vehicle component comprises an axle component.

8. The vehicle information system of Claim 7 wherein said axle component comprises a slider.

9. The vehicle information system of Claim 2 including a general user interface to receive an input relating to a request for optimizing vehicle performance and load distribution.

10. The vehicle information system of Claim 2 including a memory unit storing optimization data.

11. The vehicle information system of Claim 10 wherein said optimization data relates to load limit information.

12. A method of adjusting vehicle load distribution comprising:
  - a) electronically sensing an actual location of a first vehicle component;
  - b) electronically determining a load distribution across a vehicle;
  - c) electronically determining an alternative location of the first vehicle component based on the sensed actual location of the first vehicle component and the load distribution across the vehicle; and
  - d) electronically outputting the alternative location of the first vehicle component to a general user interface.
13. The method of adjusting vehicle load distribution of Claim 12 including the step of:
  - e) adjusting the location of the first vehicle component based on said load distribution.
14. The method of Claim 12 including the step of:
  - f) adjusting the load distribution.
15. The method of Claim 12 wherein the first vehicle component comprises a vehicle axle.
16. The method of Claim 15 wherein the vehicle axle comprises a tandem slider.

17. The method of Claim 12 wherein step a) comprises determining the location of the first vehicle component relative to a second vehicle component.

18. The method of Claim 17 wherein the second vehicle component comprises a vehicle kingpin.

19. The method of Claim 12 wherein step b) comprises determining a center of gravity of the vehicle.

20. The method of Claim 12 including the step of g) electronically determining if the load distribution across the vehicle complies with load limit information.